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State of Utah

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

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DIVISION OF
OIL GAS & MINING

April 30, 1992

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MINERALS PROGRAM
FILE COPY

Mr. Ken Kluksdahl, Manager
Tenneco Minerals
P.O. Box 2650
St. George, UT 84770

RE: Proposed Expansion
Goldstrike Mine
Permit-by-Rule

Dear Mr. Kluksdahl:

Thank you for the well logs, chemical data and other information received during our conference on April 21, 1992, regarding the expansion of the Goldstrike Mine at St. George, Utah. The information was needed to complete the evaluation of Tenneco's application for expansion of mining activities. Based on the information received and the information already in our files, the hydrologic situation at the site is as follows:

1. The water table is generally 150 to 200 feet or more below land surface. There may, however, be a few areas where ground water is perched above this level.
2. Well logs generally indicate that the observable mineralization above the water table is dominated by stable minerals or by those produced by weathering in the oxidized zone. Former iron sulfides (pyrite) has been converted to insoluble iron hydroxides. Mobile sulfur compounds were presumably carried away by solutions as much of the bedrock is reddish brown, containing jaspoid structures, but little gypsum. Only small pockets of residual pyrite remains.
3. Chemical data generally supports the conclusions in No. 2 above. Acid potential is low because of low sulfide content and the neutralization potential is high as the country rock contains much limestone.

Based on this information, it is concluded the mine expansion as specified in item no. 1 below will have a de minimus effect on ground water and is "Permitted by Rule" under the provision of (R317-6-6.2) provided the operation conforms to the following stipulations.

Mr. Ken Kluksdahl, Manager

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1. Only the roads and the East 1, East 2, West pits, the Arsenic pit, the Covington pit, the Caribou pit, the Moosehead pit, the Picaroon pit and the West dump are covered by this action.
2. Tenneco is required to notify the Division and submit plans for burial if any previously undetected vein containing significant pyrite is found.
3. Since small pockets of residual pyrite may remain in waste dumps and the floors and the sides of mine pits, reclamation of these sites must be completed when mining is finished, in conformance with the Division of Oil, Gas and Mining requirements.
4. Ground Water and Construction permits will still be needed for the additional pads and ponds as specified in our March 3, 1992 letter.

As part of the process for reviewing this proposal an administrative fee of \$50.00 per hour has been assessed. Therefore please remit \$400.00 to the Division upon receipt of this letter.

If you have any questions, call Mack Croft or Larry Mize at 538-6146.

Sincerely,

Utah Water Quality Board



Don A. Ostler, P.E.
Executive Secretary

DAO:MGC:rkn:mlj

cc: JBR Consultants
Wayne Thomas
Division of Oil, Gas & Mining
Southwest Utah Public Health Department
Bureau of Land Management - Cedar City

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